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09/808,377	03/14/2001	Tomas Brodsky	US010059	3327
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EXAMINER				
YODER III, CHRIS S				
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

**Application No.**

09/808,377

**Applicant(s)**

BRODSKY ET AL.

**Examiner**

CHRISS S. YODER III

**Art Unit**

2622

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 01 December 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 3-6, 12, 22-24 and 29 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 3-6, 12, 22-24 and 29 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 July 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/C)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_
- Paper No(s)/Mail Date \_\_\_\_\_

**DETAILED ACTION*****Response to Arguments***

Applicant's arguments, see pages 7-8, filed December 1, 2008, with respect to the rejection(s) of claim(s) 1 under 35 U.S.C. 103(a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view Suzuki (US Patent 5,671,450) in view of Zanen (US Patent 5,532,777) and Nishimura et al. (US Patent 5,631,697).

Applicant's arguments with respect to claims 22 and 29 have been considered but are moot in view of the new ground(s) of rejection. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 24 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claim 24 recites the limitation "reflected in the planar mirrors directly from the to the camera", which is not supported by the specification. The Examiner believes this should be amended to read, "reflected in the mirrors directly from the *mirrors* to the camera". For purposes of examination, the claim will be examined as understood by the Examiner.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. **Claim 22 is rejected under 35 U.S.C. 102(b) as being anticipated by Robinson (US Patent 4,751,570).**
2. In regard to **claim 22**, note Robinson discloses the use of a stereo camera system (column 3, lines 21-24) comprising a stereo imaging means including two cameras (column 3, lines 21-42; and figure 2: 22), each camera being angled a predetermined angle (column 3, lines 43-48) and distanced a predetermined distance with respect to each other and the object of interest (column 3, lines 43-48) for outputting at least one stereo image as a sequence of video images (column 4, lines 10-13), a recognition means for locating an object of interest in the field of view of the stereo imaging means and the distance to the object of interest from the stereo imaging means (column 2, lines 51-62), and adjusting

Art Unit: 2622

means for automatically changing at least one system parameter which affects the spatial resolution of the object of interest based on the located distance of the object of interest from the stereo imaging means (column 2, line 46 – column 3, line 59) comprising a focal length adjustment means for changing a focal length of at least one of the two cameras (column 3, lines 49-59, and figure 2: 28), an angle adjustment means for adjusting the predetermined angle of at least one of the two or more cameras (column 3, lines 15-48, and figure 2: 28), baseline adjustment means for automatically adjusting the predetermined distance between the two cameras (column 3, lines 15-48, and figure 2: 25), distance adjustments means for adjusting a distance between at least one of the two cameras and the object of interest (column 1, lines 54-62; the cameras are mounted on a remotely controlled vehicle, which is considered to adjust the distance between the cameras and the object by changing positions in relation to the object).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. **Claims 3-6, 23-24, and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki (US Patent 5,671,450) in view of Zanen (US Patent 5,532,777), and further in view of Nishimura et al. (US Patent 5,631,697).**

4. In regard to **claim 5**, note Suzuki discloses a stereo camera system comprising stereo imaging means for outputting at least one stereo image (column 1, lines 5-11, and figure 1), said stereo imaging means including a camera (column 4, lines 41-45, and figure 1: 1), a set of mirrors angled with respect to each other at a predetermined angle relative to a centrally located common plane intersecting said camera, each mirror disposed a predetermined distance from the camera along the common plane, for directing light from an object reflected in said mirrors along a straight line of sight from said mirrors to the camera, for producing a stereo effect in the output of the camera (column 5, lines 15-22, and figure 3: 8L and 8R), adjusting means for automatically changing at least one system parameter which affects the spatial resolution of the object of interest based on the focusing of the camera (column 6, line 49 – column 7, line 12; parameters of the stereo adapter are adjusted in relation to the focusing of the camera), the adjusting means comprising a distance adjustment means for adjusting a predetermined distance between the camera and the set of mirrors (column 4, line 59 – column 5, line 8, and figure 6; when the camera is focused/zoomed, the entire stereo adapter is moved along the optical axis), and a focal length adjustment means for changing a focal length of the camera (column 4, lines 41-53). Therefore, it can be seen that Suzuki fails to explicitly disclose the use of a recognition means for locating an object of interest in a field

of view of the camera and for determining at least one of a distance of the object of interest from the stereo imaging means and a size of the object of interest, that the system parameters are changed based on at least one of the located distance of the object of interest from the stereo imaging means and the size of the object of interest, and that the adjustment means includes an angle adjustment means for adjusting a predetermined angle between the set of mirrors.

In analogous art, Zanen discloses the use of a stereo imaging adapter having parameters that are adjusted in relation to the focus amount of the camera (column 5, lines 57-67), and the use of an angle adjustment means for adjusting a predetermined angle between the set of mirrors (column 6, lines 16-36, and figures 6-7; the angle between the inner mirrors 16 is adjusted using rod 43 based on the focusing of the lens). Zanen teaches that the use of an angle adjustment means for adjusting a predetermined angle between the set of mirrors is preferred in order to allow for corrections of the field of view (column 5, lines 20-25). Therefore, it would have been obvious to one of ordinary skill in the art to modify the Suzuki device to include the use of an angle adjustment means for adjusting a predetermined angle between the set of mirrors is in order to correct of the field of view of the imaging device, as suggested by Zanen.

Also in analogous art, Nishimura discloses the use of a recognition means for locating an object of interest in a field of view of the camera (column 4, lines 60-63) and for determining at least one of a distance of the object of interest from the stereo imaging means and a size of the object of interest (column 7, lines 5-

Art Unit: 2622

13, and column 10, lines 5-12), and changing imaging system parameters based on at least one of the located distance of the object of interest from the stereo imaging means and the size of the object of interest (column 8, lines 53-63, and column 9, line 54 - column 10, line 24; the tracking processor locates the object, and determines an object size that is used to control automatic zooming and focusing). Nishimura teaches that the recognition of an object of interest, determining the distance and/or size of the object, and controlling control imaging parameters based on the calculated distance and/or size is preferred in order to capture/display the object at a constant size regardless of movement (column 8, lines 53-63). Therefore, it would have been obvious to one of ordinary skill in the art to modify the primary device of Suzuki as modified by Zanen to include the use detection of the distance and/or size of a detected object to automatically control focus and/or zoom of the camera in order to capture/display the object at a constant size regardless of movement, as suggested by Nishimura.

5. In regard to **claim 3**, note Suzuki discloses the use of a still camera and the at least one stereo image is a still image (column 1, lines 5-11).
6. In regard to **claim 4**, note Suzuki discloses the use of a video camera and the at least one stereo image is a sequence of video images (column 1, lines 1, lines 5-11).
7. In regard to **claim 6**, note Nishimura discloses the use of a controller for controlling the focus/zoom settings based on the signal from the recognition means (column 8, lines 53-63, and column 9, line 54 - column 10, line 24; the tracking processor locates the object, and determines an object size that is used



Art Unit: 2622

to control automatic zooming and focusing). Suzuki and Zanen control the angle, distance, and focal length based on the focus/zoom settings (Suzuki: column 4, line 41 – column 5, line 8; Zanen: column 5, line 57 – column 6, line 36).

Therefore, through the combination of Nishimura with Suzuki and Zanen, at least one of the angle, distance, and focal length adjustment means are considered to be controlled based on the signal from the recognition means.

8. In regard to **claim 23**, note Suzuki discloses that the mirrors have adjacent ends positioned at a common point (column 5, lines 4-22, and figure 3: 8L and 8R).

9. In regard to **claim 24**, note Suzuki discloses that the mirrors are disposed for directing the light from the object which is reflected in the mirrors directly from the mirrors to the camera (column 5, lines 15-22).

10. In regard to **claim 29**, this is a method claim, corresponding to the apparatus in claim 1. Therefore, claim 29 has been analyzed and rejected as previously discussed with respect claim 1.

11. **Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki (US Patent 5,671,450) in view of Zanen (US Patent 5,532,777), and further in view of Nishimura et al. (US Patent 5,631,697) and Cox (US Patent 5,383,013).**

12. In regard to **claim 12**, note the primary reference of Suzuki in view of Zanen and Nishimura disclose the use of a stereo camera system, as claimed in

Art Unit: 2622

claim 5 above. Therefore, it can be seen that the primary reference fails to explicitly disclose that the recognition means is a stereo vision system.

In analogous art, Cox discloses the use of a recognition means to locate an object of interest using a stereo vision system (column 2, line 65 – column 3, line 14). Cox teaches that the use of a stereo vision system to locate an object of interest and determine the distance is preferred in order to allow depth detection of almost all points in the image to be determined simultaneously, thereby providing a faster detection (column 1, lines 20-36). Therefore, it would have been obvious to one of ordinary skill in the art to modify the primary device to include the use of a stereo vision system as the recognition means to locate an object of interest in order to provide a faster detection of object information by calculating almost all points in the image simultaneously, as suggested by Cox.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US006809771B1: note the use of a stereo imaging device having adjustable image parameters.

US006326994B1: note the use of a stereo imaging device having adjustable image parameters controlled based on image pattern matching.

US006643396B1: note the use of a single camera used to capture stereo images by adjusting image parameters.

US004878080: note the use of automatic zoom/focus adjustment based on a detected object size.

US002413996: note the use of a stereo imaging device having adjustable image parameters.

US004568970: note the use of a stereo imaging device having adjustable image parameters.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHRISS S. YODER III whose telephone number is (571)272-7323. The examiner can normally be reached on M-F: 8 - 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lin Ye can be reached on (571) 272-7372. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2622

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/C. S. Y./

Examiner, Art Unit 2622

/Lin Ye/

Supervisory Patent Examiner, Art Unit 2622